

CLAIMS

~~Sub A~~

~~1.~~ A frame configured to:

~~(i) be transmitted on a network; and~~

~~(ii) store data packets in a plurality of channels,~~

~~wherein one or more of said plurality of channels is configured to~~

~~5 store one or more fragments of said data packets.~~

~~2. The frame according to claim 1, wherein one or more of said channels is configured to store only complete packets from a fixed bandwidth source.~~

~~3. The frame according to claim 1, wherein said network comprises a fiber optic network.~~

~~4. The frame according to claim 1, wherein said network comprises a SONET/SDH fiber optic network.~~

~~5. The frame according to claim 1, wherein said frame comprises one or more offset locators configured to point to a next fragment of said one or more fragments.~~

6. The frame according to claim 5, wherein said frame further comprises one or more header locators configured to identify said next fragment.

Sub A ~~Sub B~~ 7. The frame according to claim 6, wherein said frame further comprises one or more trailer location configured to identify either (i) an end of one said one or more offset locators and (ii) an end one of data packets.

Sub B ~~Sub A~~ 8. The frame according to claim 1, wherein each of said plurality of channels comprises fixed bandwidth channels.

Sub A ~~Sub B~~ 9. The frame according to claim 7, wherein said payload portion is configured to be reloaded with a partial data load.

10. The frame according to claim 1, wherein said data packets is selected from a group consisting of IP packets, Packet-Over-SONET (POS), PPP packets, ATM cells, G.702-based PDH (T1/T3) packets, SRP packets, Frame Relay packets, and other appropriate packet data types.

11. The frame according to claim 1, wherein said network comprises a media selected from the group consisting of ring and point-to-point networks and non-SONET configurations such as point-to-point WDM networks.

~~Sub A7~~ 12. The frame according to claim 1, wherein one of said data packets are selected on a packet by packet basis.

~~B~~ 13. An apparatus comprising:
one or more nodes coupled to a network, each node configured to receive and/or transmit one or more of a plurality of frames, wherein each of said plurality of frames is configured to store data packets in a plurality of channels, wherein one or more of said channels is configured to store one or more fragments of said data packets separated by an offset pointer.

14. The apparatus according to claim 13, wherein data from each of a number of source channels is dynamically allocated in response to bandwidth demands.

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15. The apparatus according to claim 13, wherein said frame comprises one or more packets, each comprising one or more offset locators configured to point to a next fragment of said one or more fragments.

16. The apparatus according to claim 15, wherein each of said one or more packets comprise one or more header locators configured to identify said next fragment.

17. The apparatus according to claim 16, wherein each of said one or more packets comprise one or more trailer locations configured to identify either (i) an end of one said one or more offset locators and (ii) an end one of data packets.

18. The apparatus according to claim 13, wherein each of said plurality of channels comprise fixed bandwidth channels.

19. The apparatus according to claim 13, wherein said payload portion is configured to be reloaded with a partial data load.

20. A method for transferring data comprising the steps of:

(A) receiving and/or transmitting one or more of a plurality of frames;

5 (B) configuring each of said frames to store data
packets in a plurality of channels; and

(C) configuring said channels to store one or more fragments of said data packets, separated and linked by an offset pointer.